

Abstract of the Invention

The present invention is related to a system and method of caching data employing probabilistic predictive techniques. The system and method has particular application to multimedia systems for providing local storage of a subset of available viewing selections by assigning a value to a selection and retaining selections in the cache depending on the value and size of the selection. The value assigned to an item can represent the time-dependent likelihood that a user will review an item at some time in the future. An initial value of an item can be based on the user's viewing habits, the user's viewing habit over particular time segment (*e.g.*, early morning, late morning, early afternoon, late afternoon, primetime, late night) and/or viewing habits of a group of user's during a particular time segment. A value assigned to a selection dynamically changes according to a set of cache retention policies, where the value can be time-dependent functions that decay based on the class of the item, as determined by inference about the class or *via* a label associated with the item. A selections value may be reduced as the selection ages because a user is less likely to view the selection over time. Additionally, a value of a selection may change based on changes on a user's viewing habits, changes in time segments or a user's modification of the cache retention policies.